How can I learn more about our drinking water?

If you have any questions about this report or concerning your water utility, please contact Todd Blanton by one of the following methods:

- Call the office at (859) 234-7159
- Write to PO Box 67, Cynthiana, KY 41031
- Send email: tblantonwtp@bellsouth.net.

We want our valued customers to be informed about their water utility. You can attend regular board meetings on the second and fourth Tuesdays of each month at 5:30 pm in the Commissioner's Room, City Hall, at 104 E. Pleasant Street.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

City of Cynthiana
Water Department
PWS ID# KY0490096
PO Box 67
Cynthiana, KY 41031

2011 ANNUAL DRINKING WATER QUALITY REPORT

2011 Annual Drinking Water Quality Report

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand, and be involved in, the efforts we make to continually improve the water treatment process and protect our water resources.

The City of Cynthiana has been providing clean water to your community since 1965, helping to keep you and your family healthy. It is the goal of the City of Cynthiana and the Water Treatment Plant Staff to produce quality water that is colorless, free of objectionable taste and odor, and economical. We take this mission very seriously.

Where does our drinking water come from?

Cynthiana is by far the largest source of water supply within Harrison County. The City of Cynthiana treats and distributes water to 2700 residential, commercial, and industrial customers within the city as well as provides water to the Harrison County Water Association for distribution throughout Harrison County and parts of Bourbon and Scott Counties. In 2011 our water plant treated 731,077,750 gallons of water. We have two sources of surface water. The primary source is the South Fork of the Licking River, which begins in Bourbon County with the confluence of Hinkston and Stoner Creeks at Ruddles Mill. The second source is the Main Licking River at the Devils Backbone.

In 2011 the City of Cynthiana purchased 4.09 acres adjacent to the Water Treatment Plant to further enhance water treatment. In addition the Water Treatment Plant upgraded their communication and control systems to aid in water distribution and water quality control.

How is our water treated?

Cynthiana treats your water using disinfection and filtration to remove or reduce harmful contaminants that may come from source water. All of our operators are extensively trained, tested, and certified by the state of Kentucky. The Cynthiana Water Treatment Plant is a Class IVA plant with a design capacity of 6.0 mgd (million gallon per day).

How safe is the source of our drinking water?

We have completed a Source Water Assessment Plan (SWAP); the following is a summary of our system's susceptibility to contamination. An analysis of the susceptibility of the Cynthiana water supply to contamination indicates that this susceptibility is generally moderate. There are, however, a few areas of high concern. Several bridges, a railroad, areas of row crops, sewer lines, several firms that treat, store or dispose of hazardous waste, a historical landfill, an airport, a KPDES permitted discharger, several waste generators and/or transporters and recreational grasses are present in the vicinity of the intakes. There are numerous permitted operations and activities and other potential contaminant sources within the watersheds. These potential contaminant sources include underground storage tanks, forest areas, major roads and firms that handle hazardous wastes. The complete Source Water Assessment (SWAP) can be viewed at either the Water Treatment Plant, at 201 Waterworks/Abdallah Park Road, or the City Clerk's Office, at 104 E. Pleasant Street, Suite One.

The U.S. Environmental Protection Agency (EPA) wants you to know:

In order to assure tap water is safe to drink, EPA has regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

Lead and Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Cynthiana is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

2011 Monitoring Results

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Turbidity – *Representative samples of filtered water*

Allowable Levels	Violation Y/N	Highest Single Measurement	Lowest Monthly Percent	Likely Source
No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	N	0.242	100	Soil runoff

♦ *Turbidity is a measurement of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.*

Microbiological Contaminants

Contaminant (Units)	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (# or % positive samples)	N	1	0	1 positive sample per month	Naturally present in the environment

Radioactive Contaminants

Contaminant (Units)	Violation Y/N	Level Detected	MCLG	MCL	Sample Date	Major Sources in Drinking Water
Combined radium (pCi/L)	N	2.26	0	5	02/11	Erosion of natural deposits
Uranium (µg/L)	N	0.21	0	30	02/11	Erosion of natural deposits

Lead and Copper Tap Monitoring

Contaminant (Units)	Number of Sites over Action Level	90th Percentile Result	Range of Detection	Action Level	Sample Date	Major Sources in Drinking Water
Copper (ppm)	0	0.065	0.019-0.097	1.3	06/10	Corrosion of household plumbing systems
Lead (ppb)	0	6	0-14	15	06/10	

Inorganic Contaminants

Contaminant (Units)	Violation Y/N	Level Detected	Sample Date	MCLG	MCL	Major Sources in Drinking Water
Cyanide (ppb)	N	Highest: 11.0	02/11	200	200	Discharge from steel/metal factories; plastic and fertilizer factories
Fluoride (ppm)	N	Average: 0.95 Range: 0.81 – 1.3	08/11	4	4	Water additive which promotes strong teeth
Nitrate (ppm)	N	Highest: 5.1	02/11	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Disinfectants/Disinfection Byproducts and Precursors

Contaminant	Violation Y/N	Level Detected	MCLG [MRDLG]	MCL [MRDL]	Likely Source of Contamination
Total Organic Carbon (ppm) (measured as ppm but reported as a ratio)	N	Lowest Average: 1.82 Range: 0.79-4.0	NA	TT*	Naturally present in the environment
Chlorine (ppm)	N	Highest Average: 1.49 Range: 0.31-2.1	[4]	[4]	Water additive used to control microbes
HAA [Haloacetic Acids] (ppb)	N	System Average: 35 Range of System Sites: 0-39	NA	60	Byproduct of drinking water disinfection
TTHM [Total Trihalomethanes] (ppb)	N	System Average: 37 Range of System Sites: 8-152	NA	**80**	Byproduct of drinking water disinfection

** Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance.*

Secondary Contaminants				
Contaminant (Unit)	Maximum Allowable Level	Report Level	Range of Detection	Sample Date
Chloride (mg/l)	250	48	48-48	02/11
Corrosivity	Noncorrosive	0.22	NA	02/11
Fluoride (mg/l)	2.0	0.99	0.99-0.99	02/11
Iron (mg/l)	0.3	0.01	0.01-0.01	02/11
Odor	3 threshold odor number	1.51	1.51-1.51	02/11
pH	6.5-8.5	7.6	7.6-7.6	02/11
Sulfate (mg/l)	250	27	27-27	02/11
Total Dissolved Solids (mg/l)	500	290	290-290	02/11

Definitions:

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

EPA: Environmental Protection Agency.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

NTU (Nephelometric Turbidity Units): A measure of clarity.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): micrograms per liter (µg/l).

ppm (parts per million): milligrams per liter (mg/l).

ppt: parts per trillion.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.